

December 23, 2005

Via Electronic Filing

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Re: Shared Use of the 2496-2500 MHz Band Between Industrial, Scientific and Medical ("ISM") Devices and Broadband Radio Service ("BRS"); IB Docket No. 02-364 and ET Docket No. 00-258; WRITTEN EX PARTE COMMUNICATION of the Association of Home Appliance Manufacturers ("AHAM")

Dear Ms. Dortch:

Pursuant to the provisions of Section 1.1206 of the rules of the Federal Communications Commission ("FCC" or "Commission"), AHAM submits this correspondence for inclusion in the record of the above referenced proceedings. In particular, AHAM provides this letter in response to the December 1, December 8, December 13 and December 15, 2005 *ex parte* notices (and the associated presentations) submitted to the FCC by Motorola, Inc. ("Motorola") following up Motorola's recent meetings with the FCC's staff. As discussed more fully below, Motorola's presentations are merely a reiteration of the data and arguments presented to the FCC by the Wireless Communications Association International, Inc. ("WCA") and Sprint Nextel Corporation ("Sprint"). AHAM has already demonstrated why the WCA and Sprint arguments (and now the Motorola arguments) are invalid interpretations of outdated information that was improperly generated in the first instance. Therefore, the FCC should disregard the Motorola submissions and retain in place the current regulations governing the use of the band 2400-2500 MHz by ISM devices in general and microwave ovens in particular.

An example of Motorola's reliance on already discredited information is its assertion that microwave ovens that meet the Part 18 limit outside of the 2400-2500 MHz band also meet the Part 18 limits starting at 2496 MHz (except, according to Motorola, for one). This appears to be a reiteration of the information presented to the FCC by WCA on September 9, 2005. However, as demonstrated in AHAM's *ex parte* letter dated September 27, 2005, that WCA correspondence, intentionally or not, completely misrepresented the data on which it relied. Although the FCC's attention is directed to AHAM's September 27, 2005 letter for a complete assessment of WCA's bungled analysis, the critical point is that WCA essentially inverted the results. Therefore, Motorola's analysis, to the extent it reiterates WCA's, is similarly flawed. Motorola does nothing to address the fact that the WCA results on which it relies are fundamentally a misinterpretation of the data WCA used to produce those results.

Similarly, AHAM notes that Motorola continues to rely on Sprint's incorrect presentation of the Part 18 power limit for devices operating with greater than 500 watts. As AHAM pointed out *twice*

already (*see* the AHAM *ex parte* presentations of September 27 and October 21, 2005), the Part 18 power level used by Sprint (and now Motorola), does not apply to microwave ovens at all; it applies to arc welders and similar devices.^{1/} Therefore, the FCC must completely reject the technical data presented by Motorola for the reasons stated here and in AHAM's comprehensive rebuttals of that data on September 27 and October 21, 2005.

Motorola generally relies, as did WCA and Sprint before it, on information developed by the National Telecommunications and Information Administration ("NTIA") in an 11 year old study. As AHAM pointed out, and no party has challenged, that study was not designed to support the analyses or conclusions that Motorola presents. AHAM has noted in detail the material deficiencies in the NTIA study in its September 27 letter (*see* footnote 5 of that letter). The NTIA study was never designed to measure the level of acceptable emissions. The measurement methods and the size and shape of the load in the oven cavity were different than those specified in Part 18. Also, the ovens NTIA tested may bear little relationship to the ovens in use today. AHAM's criticism of the NTIA remains unchallenged, yet Motorola continues to rely on data derived from the study. Motorola's failure to address the significant deficiencies of the NTIA report, that AHAM pointed out, must be interpreted as a concurrence of AHAM's assessment. Therefore, it is curious that Motorola continues to rely on the faulty study.

Motorola's other contentions are similarly incorrect. Motorola asserts that "Current unlimited ISM devices adds uncertainty to BRS design requirements." Like WCA and Sprint, Motorola fails to take into consideration the nearly 115 million microwave ovens in use. As Sprint and WCA have proposed, there will be no need to retire or modify microwave ovens currently in use. Those devices are expected to continue to be in operation for 9-14 years. Therefore, BRS licensees, in order to initiate service, must take the embedded base of microwave ovens into consideration. If they design products that take the embedded base of products into consideration -- as they responsibly should -- there will be no need to modify future products.

Motorola also argues that "There is no Reason to Believe that the Proposed Limits will Result in 'US-Only' Product." Again, Motorola completely ignores the information already contained in the record. AHAM has demonstrated the significant product re-design that will be required if there is any change to the FCC's requirements that govern the operation of microwave ovens. Those re-designed products will be less feature rich and more expensive than current devices. It defies logic to assert that in other markets, where regulators will presumably adhere to the international telecommunications regulations and microwave ovens will be permitted to operate as they do today, consumers will prefer these less feature rich and more expensive microwave ovens.

Motorola asserts that limitation of emissions within ISM bands is consistent with international treaties. Motorola is wrong. As Motorola itself points out, licensed services that operate in the ISM bands must accept harmful interference from ISM devices.^{2/} An FCC rule that requires a new

^{1/} Motorola also ignores the fact that AHAM pointed out that Sprint's analysis was based on the faulty assumption that microwave ovens would be radiating in the direct line of sight of BRS receivers. It ignores the possibility, as AHAM demonstrated, that slight rotation of a BRS device might ameliorate interference, if any, generated by a microwave oven.

^{2/} Motorola notes that BRS is a primary service and should, unlike Wi-Fi and other unlicensed devices in the 2400-2483.5 MHz band, be subject to greater protection. However, Motorola's assertion is inconsistent with its own

limitation on ISM devices is fundamentally inconsistent with those international regulations. While Motorola correctly notes WRC-03 called for *studies* to investigate whether there should be emission limits in the ISM bands, it fails to note that those studies never occurred. Those studies, if they are ever conducted, may demonstrate that the imposition of emission limits is ill-advised. Therefore, it is premature for the FCC to impose emission limits on ISM devices, contrary to international regulation, on the assumption that *if* studies are ever initiated to evaluate this matter, the result of those studies will be the imposition of emission limits (or emission limits consistent with those imposed by the United States).

Finally, like WCA and Sprint, Motorola fails to take into account several critical issues regarding the potential interference to BRS devices from microwave ovens. First, as AHAM pointed out, and Motorola fails to address, microwave ovens are only in use an average of 1% of the day. Therefore, Motorola and others would require a re-design of one of the most ubiquitous consumer devices to address a problem which, if it exists at all, will not occur an average of 99% of the time. Second, Motorola fails to address why the manufacturers of BRS devices cannot take the existence of microwave ovens into consideration when designing their products -- particularly because those devices will continue to be in operation for another 9-14 years.

Based on the foregoing, AHAM continues to urge the FCC to reject the petitions for reconsideration of the decision in these proceedings and retain the regulatory scheme, used on a world-wide basis, for the band 2400-2500 MHz.

If there are any questions regarding this matter, please contact the undersigned directly.

Sincerely,



David B. Calabrese
Vice President
Government Relations

Of Counsel:

Russell H. Fox
Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.
701 Pennsylvania Ave., N.W.
Suite 900
Washington, DC 20004
202-434-7300
rfox@mintz.com

acknowledgement that all services -- even licensed services -- are subject to interference from ISM devices in the 2400-2500 MHz band, consistent with international treatment of the band.

cc: (each electronically)
Fred Campbell
John Giusti
Barry Ohlson
Cathleen Massey
Catherine Seidel
Thomas Stanley
Uzoma Onyeije
Joel Taubenblatt
John Schauble
Bruce Franca
Julius Knapp
Karen Rackley
Alan Scrim
Ira Keltz
Geraldine Matisse
Jamison Prime
Howard Griboff
Paul Locke